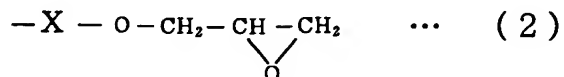
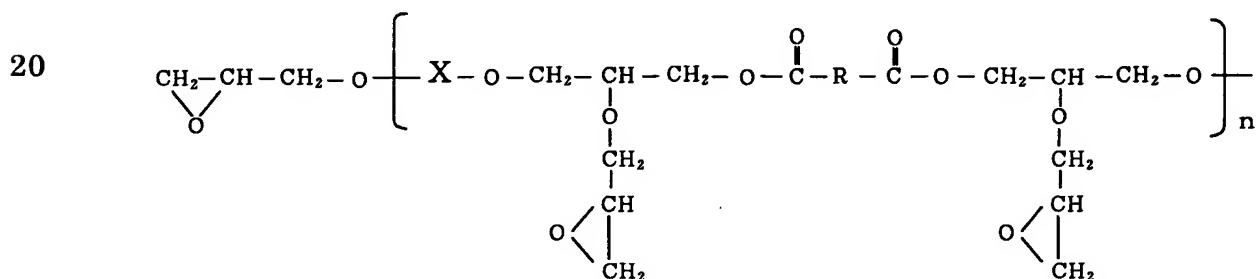


WHAT IS CLAIMED IS:

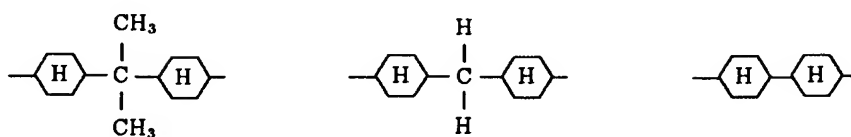
1. An actinic energy ray-curable resin obtained by reacting (c) an epihalohydrin with hydroxyl groups of a linear epoxy resin (A') which is a product of the polyaddition reaction of (a) a bifunctional hydrogenated bisphenolic epoxy compound having a hydrogenation degree of 0.1 to 100% with (b) a compound having at least two carboxyl groups in its molecule to obtain a polynuclear epoxy resin (A'') having epoxy groups in its terminal and side chain and further reacting (d) an unsaturated monocarboxylic acid with an epoxy group of said polynuclear epoxy resin to introduce a photopolymerizable unsaturated group therein and further reacting (e) a polybasic acid anhydride with a hydroxyl group of said polynuclear epoxy resin to introduce a carboxyl group therein.

2. The actinic energy ray-curable resin according to claim 1, wherein said polynuclear epoxy resin (A'') has the structure represented by the following general formula (2):



Wherein R represents a polycarboxylic compound residue, X represents at least one group represented by the following

formulas, and n is an integer of not less than 1.



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3. An actinic energy ray-curable resin obtained by reacting (c) an epihalohydrin with hydroxyl groups of a linear epoxy resin (A') which is a product of the polyaddition reaction of (a) a bifunctional hydrogenated bisphenol A epoxy compound having a hydrogenation degree of 0.1 to 100% with (b) a compound having at least two carboxyl groups in its molecule to obtain a polynuclear epoxy resin (A'') having epoxy groups in its terminal and side chain and further reacting (d) an unsaturated monocarboxylic acid with an epoxy group of said polynuclear epoxy resin to introduce a photopolymerizable unsaturated group therein and further reacting (e) a polybasic acid anhydride with a hydroxyl group of said polynuclear epoxy resin to introduce a carboxyl group therein.

4. A photocurable and thermosetting resin composition capable of being developed with an aqueous alkaline solution, comprising (A) the actinic energy ray-curable resin set forth in claim 1, (B) a photopolymerization initiator, (C) a diluent, and (D) an epoxy compound containing at least two epoxy groups in its molecule.

5. The composition according to claim 4, which contains the photopolymerization initiator (B) in an amount of 0.1 to 25 parts by weight, the diluent (C) in an amount of 10 to 60 parts by weight, and the epoxy compound (D) having at least two epoxy groups in its molecule in an amount of 10 to 100 parts by weight, based

on 100 parts by weight of said actinic energy ray-curable resin (A).

6. The composition according to claim 4, further comprising (E) an epoxy curing catalyst.

5 7. The composition according to claim 4, further comprising (F) a spherical porous filler having an average particle diameter of 1 to 10 μm .

10 8. The composition according to claim 4, further comprising (G) an actinic energy ray-curable resin other than said actinic energy ray-curable resin (A).

9. The composition according to claim 4, further comprising (H) an epoxidized polybutadiene.

10. The composition according to claim 4, further comprising (I) spherical urethane beads.

15 11. The composition according to claim 4, which is in the state of liquid.

12. The composition according to claim 4, which is in the form of a dry film.

20 13. A photocurable and thermosetting resin composition capable of being developed with an aqueous alkaline solution, comprising (A) the actinic energy ray-curable resin set forth in claim 3, (B) a photopolymerization initiator, (C) a diluent, and (D) an epoxy compound containing at least two epoxy groups in its molecule.

25 14. The composition according to claim 13, which contains the photopolymerization initiator (B) in an amount of 0.1 to 25 parts by weight, the diluent (C) in an amount of 10 to 60 parts by weight, and the epoxy compound (D) having at least two epoxy groups in its molecule in an amount of 10 to 100 parts by weight,

based on 100 parts by weight of said actinic energy ray-curable resin (A).

15. The composition according to claim 13, further comprising (E) an epoxy curing catalyst.

5 16. The composition according to claim 13, further comprising (F) a spherical porous filler having an average particle diameter of 1 to 10 μm .

17. The composition according to claim 13, further comprising (G) an actinic energy ray-curable resin other than
10 said actinic energy ray-curable resin (A).

18. The composition according to claim 13, further comprising (H) an epoxidized polybutadiene.

19. The composition according to claim 13, further comprising (I) spherical urethane beads.

15 20. The composition according to claim 13, which is in the state of liquid.

21. The composition according to claim 13, which is in the form of a dry film.

22. A cured product obtained by curing the photocurable and
20 thermosetting resin composition set forth in claim 4 by means of irradiation of actinic energy rays and/or heating.

23. A cured product obtained by curing the photocurable and thermosetting resin composition set forth in claim 13 by means of irradiation of actinic energy rays and/or heating.

25 24. A printed circuit board having an interlaminar insulating layer and/or a solder resist layer formed from the photocurable and thermosetting resin composition set forth in claim 4.

25. A printed circuit board having an interlaminar

insulating layer and/or a solder resist layer formed from the photocurable and thermosetting resin composition set forth in claim 13.